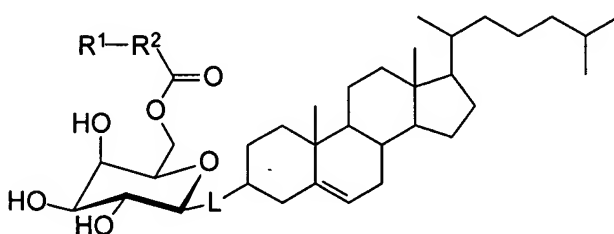


### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A compound of formula A below, or a pharmaceutically acceptable salt thereof, wherein the compound of formula A comprises



wherein R<sup>1</sup> is selected from azido, amino, substituted amino, hydrazino, hydrazide, semicarbazide, or carbonylhydrazide;

~~R<sup>2</sup> is selected from a saturated or unsaturated carbon chain containing [[1]] 5 to [[25]] 20 carbon atoms, or a saturated or unsaturated substituted carbon chain containing 1 to 25 carbon atoms; and~~

~~L is selected from O, N, S, P, or an alkylene radical.~~

### Claims 2-4 (Canceled)

5. (Original) A conjugate comprising the compound of claim 1 and at least one protein carrier, wherein the compound of claim 1 is covalently bound to the protein carrier.

**Claim 6 (Canceled)**

7. (Original) The conjugate of claim 5, wherein the compound of claim 1 is covalently bound to the protein carrier via the R<sup>1</sup> group.

**Claim 8 (Canceled)**

9. (Previously presented) The conjugate of claim 5, wherein the protein carrier comprises bovine serum albumin, ovalbumin, keyhole limpet hemocyanin, purified protein derivative of tuberculin, tetanus toxoid, cholera toxoid, diphtheria toxoid, *Pseudomonas aeruginosa* toxoid, *Clostridium* toxoid, Shiga toxin, hepatitis B antigen, or a sequence of amino acids of a *Borrelia burgdorferi* polypeptide.

Claims 10-11 (Canceled)

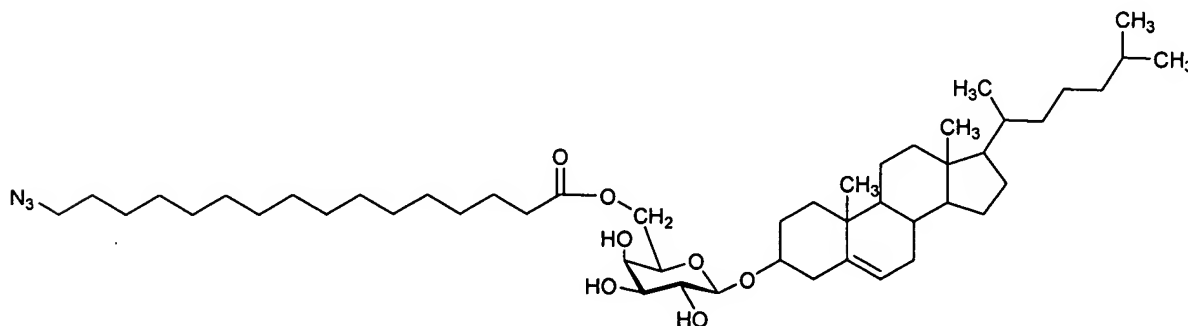
12. (Original) A pharmaceutical composition comprising a therapeutically effective amount of the compound of claim 1 and a pharmaceutically acceptable carrier.

Claim 13 (Canceled)

14. (Original) A pharmaceutical composition comprising a therapeutically effective amount of the conjugate of claim 5.

Claims 15-37 (Canceled).

38. (Previously presented) A compound, or a pharmaceutically acceptable salt thereof, having a structure represented by the formula:



39. (Previously presented) A conjugate comprising the compound of claim 38 and at least one protein carrier, wherein the compound of claim 38 is covalently bound to the protein carrier.

40. (Previously presented) A method of inducing an immune response to *B. burgdorferi* in a subject, comprising administering a therapeutically effective amount of the compound of claim 38 to the subject, thereby inducing the immune response.

41. (Currently amended) The compound of claim ~~[[2]]~~ 1, ~~wherein R<sup>1</sup> is azido, and R<sup>2</sup> is a saturated or unsaturated~~ carbon chain containing 11, 13, 15 or 17 carbon atoms.

42. (Previously presented) A method of inducing an immune response to *B. burgdorferi* in a subject, comprising administering a therapeutically effective amount of the conjugate of claim 39 to the subject, thereby inducing the immune response.

43. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of the compound of claim 38.